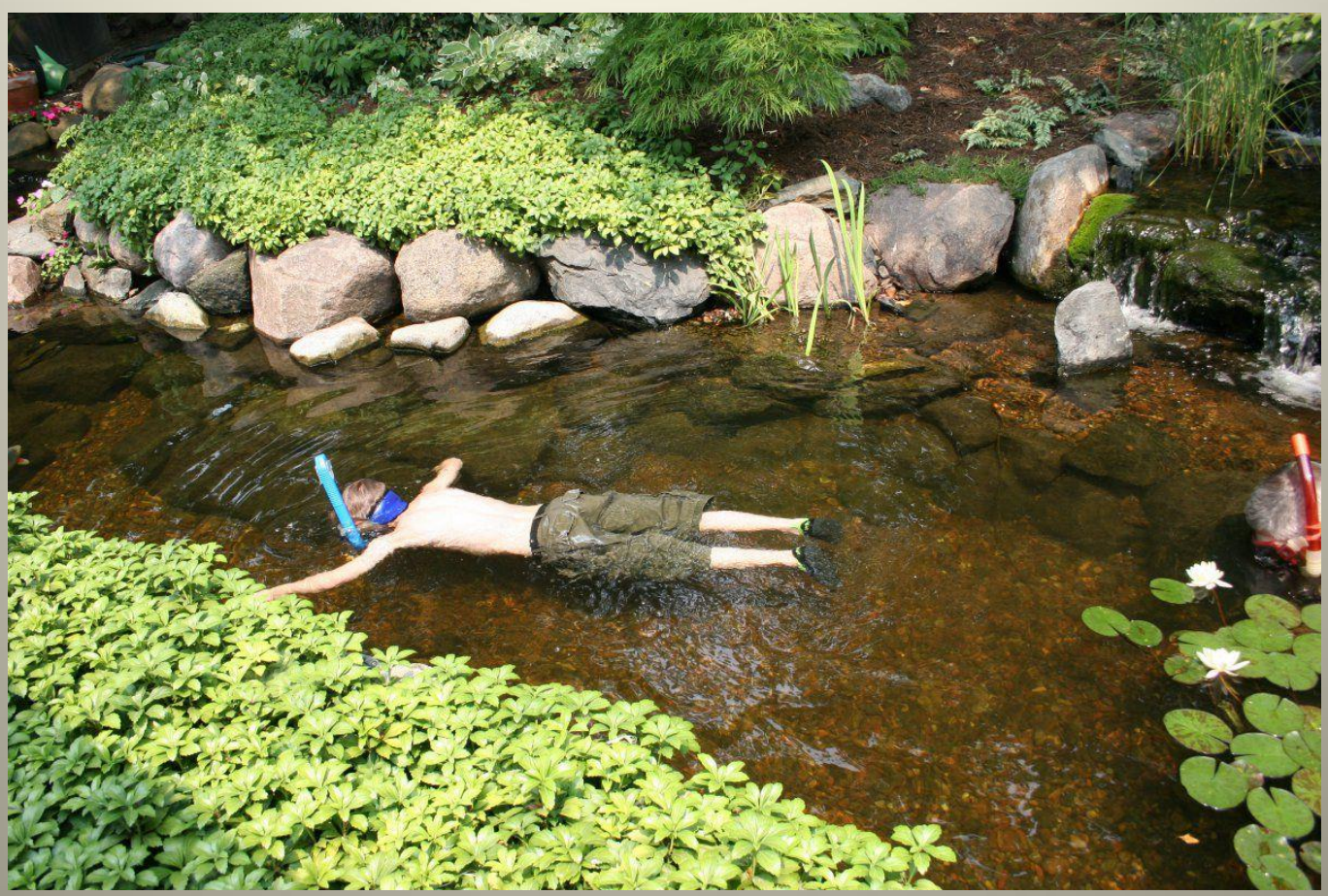
Algae Prevention & Management

C. Wade Bales
Fisheries Biologist

Not Your Typical Pond…



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Approach:

- What are typical algae we deal with
- Function of stormwater ponds and why algae is troublesome
- Algae prevention
- Algae management
- Summary

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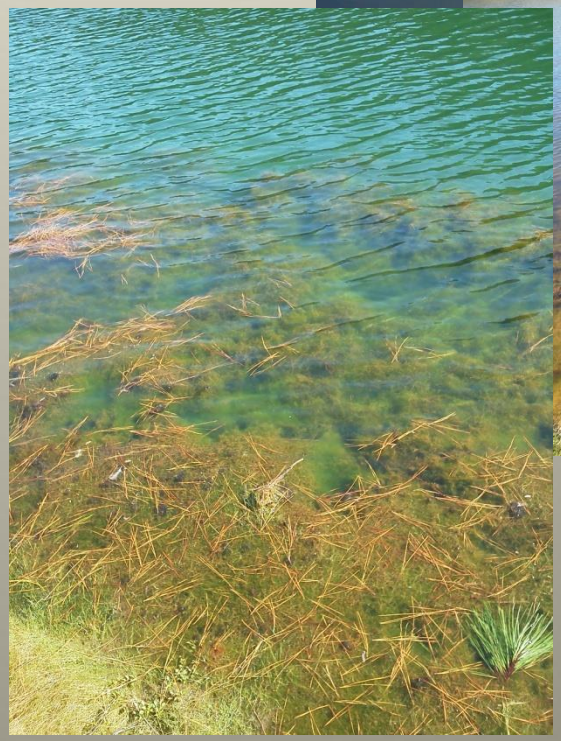
Filamentous Algae

- Green slimies
- Bottom to surface mats
- All substrates
- All water quality
- Seasonal abundance depending on species



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Planktonic Algae

- Phytoplankton- base of food chain
- Green is good
- Too green is not good
- Blue-Green algae (cyanobacteria)- HABs
- Neutral to high pH
- Phosphorous, nitrogen

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Blue-Green/HABs

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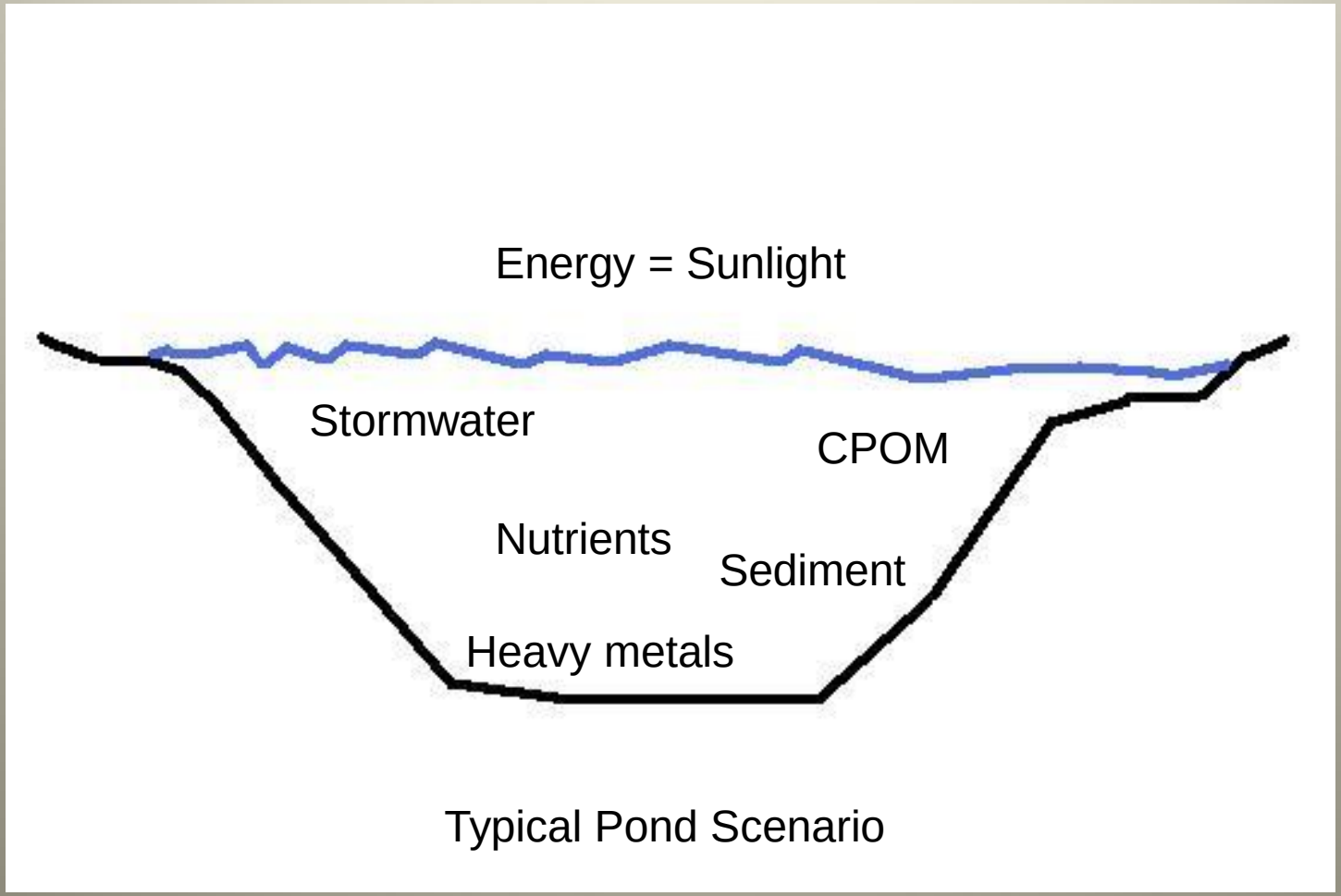
Collector of All, Mover of Some



Typical Pond Scenario

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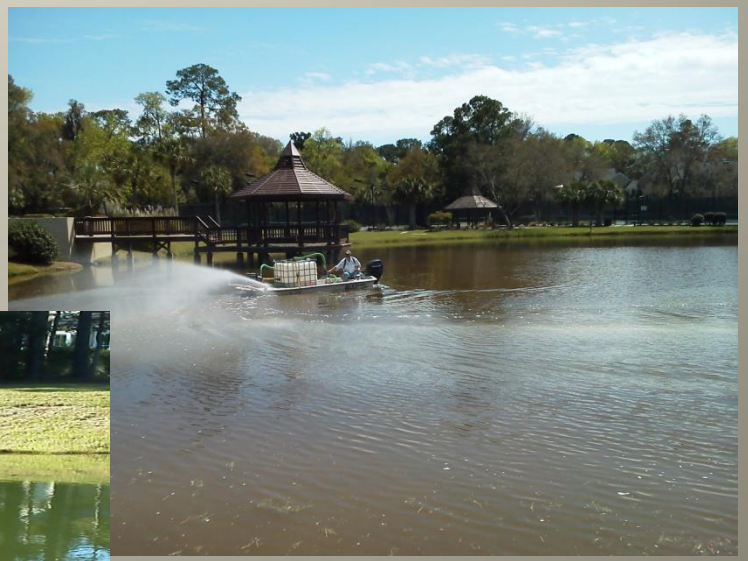
Algae Prevention

- Reduce sunlight-dye
- Reduce nutrients:
- Buffers, bmps- runoff
- Dredging
- Aeration- not a silver bullet but helps long-term natural nutrient reduction



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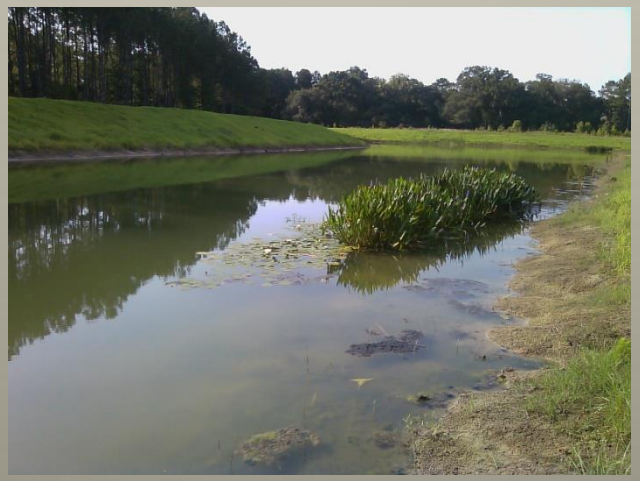
Algae Management

- **Habitat Management:**
- Nutrient reduction
- Aeration
- Natural bacteria
- Shoreline plantings
- Floating Islands



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Algae Management

- **Biological Control:**
- Tilapia
- Grass carp ***not***

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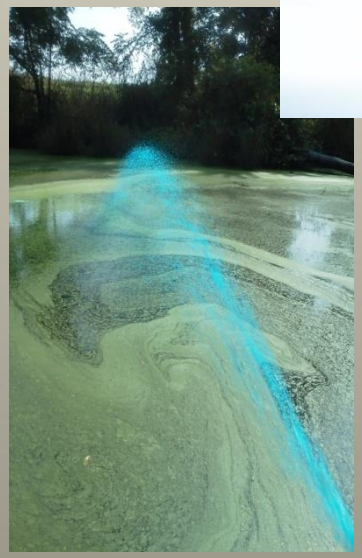
Algae Management

- **Chemical Control:**
- USEPA-labeled algaecides
- USEPA-labeled surfactants
- Chemical mowing
- Label limitations



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Closing Observations

- Purpose and design of stormwater ponds nearly promises algae growth
- Algae prevention requires removing or significant limitation of key growth elements: sunlight and nutrients
- Typical use of algaecides is not prevention but management at best
- Natural tools for algae prevention and management are available but are expensive, require further testing

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Questions?

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